

### **Abstract of the Disclosure**

A resource task-completion forecaster (122) of an ACD (104) determines a probability that an agent (156) will complete servicing a presently-assigned call by a specified time horizon  $h$ . The forecaster

5 determines (202) the type of call that the agent is servicing, determines (204) the amount of time  $t$  that the agent has already been servicing the call, retrieves (206) the mean and the variance of time historically spent by agents on servicing this type of call to completion, fits (208) the mean and the variance to a lifetime closed-form cumulative-probability distribution  $F$ ,

10 such as a Weibull distribution, to determine parameters of dispersion and central tendency, evaluates (210, 212) the distribution for  $t$  and  $h + t$ , computes (216) the probability of the agent not having completed servicing the call by now as  $Q = 1 - F(t)$ , and computes (218) the probability that the agent will have completed servicing the call by the time

15 horizon as  $P = \frac{F(t+h) - F(t)}{Q}$ . A resource scheduler (124) sums (302) the probabilities  $P$  for all agents to obtain the number of agents that are expected to be available at the time horizon, and schedules (304) for the time horizon no more than that number of new calls for servicing by the agents.